Bruhat Bangalore Mahanagara Palike

BYTARAYANAPURA DIVISION

Job No: 007-16-000043 26618

Name of Agency :- Benaka Developers and projects Pvt. Ltd

Bill No :- 1st Part Bill

Name of work: Improvements to Roads and Drains in front of Shriya Residency Near Old Police station Amruthahalli in ward No 07 - Byatarayanapura, Kodigehalli Sub Division.

Sl No	Description of Work	Unit	No.	L	B	D	Qty	Rate	Amount
1	KSRRB M300-1. Earth work excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5m, excavated surface levelled and sides neatly dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specification. MORTH / Chapter 3 (P.No.142, I.No.19.1 of PW, P&IWTD SR 2016-17)								
	Measurements recorded on:								
	Desilt	Cum							
	Varadaraja Layout Main Road								
	0-14		2	14.00	0.60	0.40	6.72		
	7th cross New culvert 13-20		1	7.00	1.80	0.60	7.56		
	20-45		2	25.00	0.60	0.40	12.00		
	6th cross New culvert 45-51		1	6.00	1.80	0.60	6.48		
	51-77		2	26.00	0.60	0.40	12.48		
	5th cross New culvert 77-84		1	7.00	1.80	0.60	7.56		
	84-109		2	25.00	0.60	0.40	12.00		
	4th cross New culvert 109-116		1	7.00	1.80	0.60	7.56		
	116-142		2	26.00	0.60	0.40	12.48		
	3rd cross New culvert 142-148		1	6.00	1.80	0.60	6.48		
	148-174		2	26.00	0.60	0.40	12.48		
	Over Burden Earth								
			2	28.00	1.70	0.40	38.08		
			2	26.00	1.30	0.40	27.04		
			2	24.00	1.20	0.40	23.04		
			1	20.00	1.40	0.45	12.60		
			1	25.00	1.30	0.60	19.50		
			1	19.00	1.00	0.40	7.60		
					Total Qty Cum		**231.66**	**196.00**	**45405.36**
2	Removing & Refixing Stone slabs of drains and Pointing in C.M(1:3) (P.No.25, I.No.5.33 of PW, P&IWTD SR 2016-17)								
	Measurements recorded on:								
	BS Slab Drain	Sqm							
	Damaged Drain								
	Varadaraja Layout Main Road								
	RHS 0-30 Bottom		1	30.00	0.45		13.50		
	sides		2	30.00	0.50		30.00		
	30-60 Bottom		1	30.00	0.45		13.50		

Bill N-D AE(W2) 10/01/18

P.A1

Assistant Executive Engineer
Kodigehalli Sub Division

Sl No	Description of Work	Unit	No.	L	B	D	Qty	Rate	Amount
	sides		2	30.00	0.50		30.00		
	60-90 Bottom		1	30.00	0.45		13.50		
	sides		2	30.00	0.50		30.00		
	90-120 Bottom		1	30.00	0.45		13.50		
	sides		2	30.00	0.50		30.00		
	120-150 bottom		1	30.00	0.45		13.50		
	sides		2	30.00	0.50		30.00		
	150-180 Bottom		1	30.00	0.45		13.50		
	sides		2	30.00	0.50		30.00		
	180-210 Bottom		1	30.00	0.45		13.50		
	sides		2	30.00	0.50		30.00		
	210-240 Bottom		1	30.00	0.45		13.50		
	sides		2	30.00	0.50		30.00		
	240-266 Bottom		1	26.00	0.45		11.70		
	sides		2	26.00	0.50		26.00		
	LHS								
	Varadaraja Layout Main Road								
	0-30 Bottom		1	30.00	0.45		13.50		
	sides		2	30.00	0.50		30.00		
	30-60 Bottom		1	30.00	0.45		13.50		
	sides		2	30.00	0.50		30.00		
	60-90 Bottom		1	30.00	0.45		13.50		
	sides		2	30.00	0.50		30.00		
	90-120 Bottom		1	30.00	0.45		13.50		
	sides		2	30.00	0.50		30.00		
	120-150 bottom		1	30.00	0.45		13.50		
	sides		2	30.00	0.50		30.00		
	150-180 Bottom		1	30.00	0.45		13.50		
	sides		2	30.00	0.50		30.00		
	180-210 Bottom		1	30.00	0.45		13.50		
	sides		2	30.00	0.50		30.00		
	210-240 Bottom		1	30.00	0.45		13.50		
	sides		2	30.00	0.50		30.00		
	240-266 Bottom		1	26.00	0.45		11.70		
	sides		2	26.00	0.50		26.00		
	BS Cover Slab Varadaraja Layout Main road		1	5.30	1.20		6.36		
	RHS		1	22.00	1.20		26.40		
	RHS		1	3.00	1.35		4.05		
	RHS		1	5.00	1.20		6.00		
	LHS		1	12.00	1.35		16.20		
	RHS		1	20.00	1.20		24.00		
	RHS		1	13.00	1.20		15.60		
					Total Qty Sqm		**870.01**	**85.00**	**73950.85**
4 7	KSRB 4-1.2: Providing and laying in position plain cement concrete of mix 1:3:6 with OPC cement @ 220kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.892 cum and fine aggregates @ 0.465 cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. (P.No.12, I.No.4.2 of PW,P&IWTD S.R 2016-17)								
	Varadaraja Layout Main Road LHS								
	7th cross New culvert 13-20		1	7.00	1.80	0.10	1.26		

P'42

AE(WS) 16/01/18

Assistant Executive Engineer

Sl No	Description of Work	Unit	No.	L	B	D	Qty	Rate	Amount
	6th cross New culvert 45-52		1	6.30	1.80	0.10	1.13		
	5th cross New culvert 77-84.5		1	7.30	1.80	0.10	1.31		
	4th cross New culvert 109-115.8		1	7.50	1.80	0.10	1.35		
	3rd cross New culvert 174-181		1	6.85	1.80	0.10	1.23		
					Total Qty Cum		6.29	5613.00	35311.38
5	KSRB 5.2-3: Providing and constructing granite size stone masonry in foundation cement mortor 1:6, stone hammered dressed in courses not less than 20cms high, bond stones at 2m. apart in each course including cost of materaials, labour, curing complete as per specifications. Specifcation No. KBS 5.1.13. (P.No.23, I.No.5.6 of PW, P&IWTD S.R 2015-16)								
	Varadaraja Layout Main Road LHS								
	7th cross New culvert 13-20		2	7.00	0.60	0.90	7.56		
	6th cross New culvert 45-52		2	6.30	0.60	0.90	6.80		
	5th cross New culvert 77-84.5		2	7.30	0.60	0.90	7.88		
	4th cross New culvert 109-115.8		2	7.50	0.60	0.90	8.10		
	3rd cross New culvert 174-181		2	6.85	0.60	0.90	7.40		
					Total Qty Cum		37.75	4657.00	175783.12
6	KSRB 15.1.1 Providing flush pointing to square rubble, course or uncoursed stone masonry with cement mortar 1:3, 20mm deep, after raking joints to depth of 20mm nicely lining, including cost of materials, labour, curing complete as per specifications. (P.No.112, I.No.15.1 of PW, P&IWTD S.R 2015-16)								
	Varadaraja Layout Main Road LHS								
	7th cross New culvert 13-20		2	7.00		0.90	12.60		
	6th cross New culvert 45-52		2	6.30		0.90	11.34		
	5th cross New culvert 77-84.5		2	7.30		0.90	13.14		
	4th cross New culvert 109-115.8		2	7.50		0.90	13.50		
	3rd cross New culvert 174-181		2	6.85		0.90	12.33		
					Total Qty Sqm		62.91	108.00	6794.28

B.V.H. Consulting Engineers Bangalore

Asst. Exe. Engr. N.D
AE(W)
18/01/18

Assistant Executive Engineer
Cauvery Bhavan
Bangalore - 560 009

BENAKA DEVELOPERS AND PROJECTS PVT. LTD. BANGALORE

P 43

Sl No	Description of Work	Unit	No.	L	B	D	Qty	Rate	Amount
7	KSRB 4-1.6: Providing and laying in position plain cement concrete of mix 1:2:4 with cement @ 240kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.878 cum and fine aggregates @ 0.459 cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation and plinth, including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. (P.No.12, I.No.4.6 of PW,P&IWTD S.R 2015-16)								
	Varadaraja Layout Main Road LHS								
	Vent portion								
	7th cross New culvert 13-20		1	7.00	0.60	0.10	0.70		
	6th cross New culvert 45-52		1	6.30	0.60	0.10	0.63		
12	5th cross New culvert 77-84.5		1	7.30	0.60	0.10	0.73		
	4th cross New culvert 109-115.8		1	7.50	0.60	0.10	0.75		
	3rd cross New culvert 174-181		1	6.85	0.60	0.10	0.69		
	Coping on side walls								
	7th cross New culvert 13-20		2	7.00	0.60	0.10	1.40		
	6th cross New culvert 45-52		2	6.30	0.60	0.10	1.26		
	5th cross New culvert 77-84.5		2	7.30	0.60	0.10	1.46		
	4th cross New culvert 109-115.8		2	7.50	0.60	0.10	1.50		
	3rd cross New culvert 174-181		2	6.85	0.60	0.10	1.37		
					Total Qty Cum		**10.49**	**6052.00**	**63455.22**
8 14	Providing and fixing RCC Precast cover slab of 250mm thick for drain in cement concrete M20 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per drawing and the directions of Engineer in-charge. (Data Rate)								
	Varadaraja Layout								
	Main Road LHS								
	7th cross New culvert 13-20		11	1.80	0.60		11.88		
	6th cross New culvert 45-52		11	1.80	0.60		11.88		
	5th cross New culvert 77-84.5		12	1.80	0.60		12.96		
	4th cross New culvert 109-115.8		12	1.80	0.60		12.96		
	3rd cross New culvert 174-181		11	1.80	0.60		11.88		
					Total Qty Sqm		**61.56**	**5580.00**	**343504.80**

AE(W2) 19/01/18

Assistant Executive Engineer
Kodigehalli

Sl No	Description of Work	Unit	No.	L	B	D	Qty	Rate	Amount
9	KSRRB M300- Scarifying Existing Granular Surface to a Depth of 50mm by Manual Means. KSRRB M300-52.1. Scarifying the existing granular road surface to a depth of 50mm and disposal of scarified material and complete as per specifications. MORTH Specification No. 305.4.3 (P.No.148, I.No.19.58 of PW,P&IWTD S.R 2016-17)								
	Measurements recorded on:								
	Varadaraja Layout LHS cross Roads								
	3rd Cross Road								
	0-25		1	25.00	(5.2+4.8)/2		125.00		
	4th Cross Road								
	0-26		1	26.00	(6.8+6.5)/2		172.90		
	5th Cross Road								
	0-30		1	30.00	(5.5+6)/2		172.50		
16	**6th Cross Road**								
	0-30		1	30.00	(4.9+4.8)/2		145.50		
	30-50		1	20.00	(4.4+5)/2		94.00		
	7th Cross Road								
	0-27		1	27.00	(5.7+6.3)/2		162.00		
	Varadaraj Layout Main Road								
	0-30		1	30.00	(5.2+5.3)/2		157.50		
	30-60		1	30.00	(5.3+4.9)/2		153.00		
	60-90		1	30.00	(4.9+6.4)/2		169.50		
	90-120		1	30.00	(6.4+5.7)/2		181.50		
	120-150		1	30.00	(5.7+6.9)/2		189.00		
	150-180		1	30.00	(6.9+5.9)/2		192.00		
	180-210		1	30.00	(5.9+5.8)/2		175.50		
	210-240		1	30.00	(5.8+5.7)/2		172.50		
	240-266		1	26.00	(5.7+5.7)/2		148.20		
					TOTAL QTY SQM		**2410.60**	**48.00**	**115708.80**
10 20	KSRRB M 400-17, Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechaniqal mix plant carriage ' of mixed Material by tipper to site, laying in uniform layers with paver in sub- base/ base course on well prepared surface and compacting with vibratory roller to achieve the desired density.complete as per specifications. MORTH Specification No. 406 (P.No.158, I.No.20.18 of PW,P&IWTD SR 2016-17)								
	Measurements recorded on:								
	Varadaraja Layout LHS cross Roads								
	3rd Cross Road								
	0-25		1	25.00	(5.2+4.8)/2	0.20	25.00		
	4th Cross Road								
	0-26		1	26.00	(6.8+6.5)/2	0.20	34.58		
	5th Cross Road								
	0-30		1	30.00	(5.5+6)/2	0.20	34.50		
	6th Cross Road								
	0-30		1	30.00	(4.9+4.8)/2	0.20	29.10		
	30-50		1	20.00	(4.4+5)/2	0.20	18.80		
	7th Cross Road								

M.N.D AE(W) 23/01/18

M.N.D AE(W) 24/01/18

P·45

Assistant Executive Engineer

Sl No	Description of Work	Unit	No.	L	B	D	Qty	Rate	Amount
	0-27		1	27.00	(5.7+6.3)/2	0.20	32.40		
	Varadaraj Layout Main Road								
	0-30		1	30.00	(5.2+5.3)/2	0.25	39.38		
	30-60		1	30.00	(5.3+4.9)/2	0.25	38.25		
	60-90		1	30.00	(4.9+6.4)/2	0.25	42.38		
	90-120		1	30.00	(6.4+5.7)/2	0.25	45.38		
	120-150		1	30.00	(5.7+6.9)/2	0.25	47.25		
	150-180		1	30.00	(6.9+5.9)/2	0.25	48.00		
	180-210		1	30.00	(5.9+5.8)/2	0.25	43.88		
	210-240		1	30.00	(5.8+5.7)/2	0.25	43.13		
	240-266		1	26.00	(5.7+5.7)/2	0.25	37.05		
					Total Qty Cum		**559.06**	**1855.00**	**1037047.03**
11	KSRRB M500-6. Providing and applying **primer coat with S.S. bitumen emulsion on prepared surface of granular base** such as WBM WMM including clearing of road surface and spraying primer at the rate of 0.60 kg /sqm using mechanical means complete as per specifications.As per MORTH Specification No. 502 with all lead and lift loading and unloading and all other incidential charges etc.complete as per specification and direction of the engineer-in-charge of the work								
	Measurements recorded on:								
	Varadaraja Layout LHS cross Roads								
	3rd Cross Road								
	0-25		1	25.00	(5.2+4.8)/2		125.00		
	4th Cross Road								
	0-26		1	26.00	(6.8+6.5)/2		172.90		
	5th Cross Road								
	0-30		1	30.00	(5.5+6)/2		172.50		
	6th Cross Road								
	0-30		1	30.00	(4.9+4.8)/2		145.50		
	30-50		1	20.00	(4.4+5)/2		94.00		
	7th Cross Road								
	0-27		1	27.00	(5.7+6.3)/2		162.00		
	Varadaraj Layout Main Road								
	0-30		1	30.00	(5.2+5.3)/2		157.50		
	30-60		1	30.00	(5.3+4.9)/2		153.00		
	60-90		1	30.00	(4.9+6.4)/2		169.50		
	90-120		1	30.00	(6.4+5.7)/2		181.50		
	120-150		1	30.00	(5.7+6.9)/2		189.00		
	150-180		1	30.00	(6.9+5.9)/2		192.00		
	180-210		1	30.00	(5.9+5.8)/2		175.50		
	210-240		1	30.00	(5.8+5.7)/2		172.50		
	240-266		1	26.00	(5.7+5.7)/2		148.20		
					Total Qty Sqm		**2410.60**	**31.00**	**74728.60**

B.V.H. Consulting Engineers Bangalore

Asstt. Exe. Engineer
AE(W-I)
30/01/18

Page 6 of 9

P.46

Assistant Executive Engineer
Kodigehalli Sub Division
Bruhat Bangalore Mahanagara Palike
Bangalore - 560 092

Sl No	Description of Work	Unit	No.	L	B	D	Qty	Rate	Amount
13	KSRRB M500-16. Providing and laying dense bituminous macadam 50-75mm compacted thickness with 4.5% VG-30 Bitumen using 40/60 TPH capacity H.M.P, using crushed aggregates of grading II, premixed with VG 30 grade bituminous binder and transporting the hot mix to work site, laying with mechanical paver to the required grade level and alignment rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH table 500-10, complete in all respects complete as per specification MORTH specification No. 507 (P.No.162 I.No. 21.17.6 of PW,P&IWTD S.R 2016-17)								
	Measurement recorded on:								
	Main Road								
	0-30		1	30.00	(5.2+5.3)/2	0.05	7.88		
	30-60		1	30.00	(5.3+4.9)/2	0.05	7.65		
	60-90		1	30.00	(4.9+6.4)/2	0.05	8.48		
	90-120		1	30.00	(6.4+5.7)/2	0.05	9.08		
	120-150		1	30.00	(5.7+6.9)/2	0.05	9.45		
	150-180		1	30.00	(6.9+5.9)/2	0.05	9.60		
	180-210		1	30.00	(5.9+5.8)/2	0.05	8.78		
	210-240		1	30.00	(5.8+5.7)/2	0.05	8.63		
	240-266		1	26.00	(5.7+5.7)/2	0.05	7.41		
					Total Qty cum		**76.94**	**7384.00**	**568088.04**
12	KSRRB 500-7. Providing and applying **tack coat using 80/100 grade bitumen**(VG10) on the prepared black topped surfaces at 2.5 kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications.MORTH Chapter 5 with all lead and lift loading and unloading and all other incidential charges etc.complete as per specification and direction of the engineer-in-charge of the work								
	Measurement recorded on:								
	For DBM								
	Varadaraj Layout Main Road								
	0-30		1	30.00	(5.2+5.3)/2		157.50		
	30-60		1	30.00	(5.3+4.9)/2		153.00		
	60-90		1	30.00	(4.9+6.4)/2		169.50		
	90-120		1	30.00	(6.4+5.7)/2		181.50		
	120-150		1	30.00	(5.7+6.9)/2		189.00		
	150-180		1	30.00	(6.9+5.9)/2		192.00		
	180-210		1	30.00	(5.9+5.8)/2		175.50		
	210-240		1	30.00	(5.8+5.7)/2		172.50		
	240-266		1	26.00	(5.7+5.7)/2		148.20		
	For BC								
	Varadaraja Layout LHS cross Roads								
	3rd Cross Road								
	0-25		1	25.00	(5.2+4.8)/2		125.00		
	4th Cross Road								
	0-26		1	26.00	(6.8+6.5)/2		172.90		
	5th Cross Road								
	0-30		1	30.00	(5.5+6)/2		172.50		
	6th Cross Road								
	0-30		1	30.00	(4.9+4.8)/2		145.50		

Assistant Executive Engineer
Kodigehalli Sub Division

Sl No	Description of Work	Unit	No.	L	B	D	Qty	Rate	Amount
	30-50		1	20.00	(4.4+5)/2		94.00		
	7th Cross Road								
	0-27		1	27.00	(5.7+6.3)/2		162.00		
	Varadaraj Layout Main Road								
	0-30		1	30.00	(5.2+5.3)/2		157.50		
	30-60		1	30.00	(5.3+4.9)/2		153.00		
	60-90		1	30.00	(4.9+6.4)/2		169.50		
	90-120		1	30.00	(6.4+5.7)/2		181.50		
	120-150		1	30.00	(5.7+6.9)/2		189.00		
	150-180		1	30.00	(6.9+5.9)/2		192.00		
	180-210		1	30.00	(5.9+5.8)/2		175.50		
23	210-240		1	30.00	(5.8+5.7)/2		172.50		
	240-266		1	26.00	(5.7+5.7)/2		148.20		
					Total Qty Sqm		**3949.30**	**13.00**	**51340.90**
13	KSRRB M500-19. Providing and laying bituminous concrete 30-40 mm compacted thickness with VG30 Bitumen grade using 40-60 HMP using crushed aggregates of grading II, premixed with bituminous binder at 5.4% of mix and filler, transporting the hot mix to work site, laying with a mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRT&H specification clause No. 500.9 complete in all respects as per specifications. MORTH Specification No. 509 (P.No.165 of I.No.21.22.6 in PW,P&IWTD S.R 2016-17)								
	Measurement recorded on:								
	Varadaraja Layout LHS cross Roads 3rd Cross Road								
	0-25		1	25.00	(5.2+4.8)/2	0.04	5.00		
	4th Cross Road								
	0-26		1	26.00	(6.8+6.5)/2	0.04	6.92		
	5th Cross Road								
	0-30		1	30.00	(5.5+6)/2	0.04	6.90		
	6th Cross Road								
	0-30		1	30.00	(4.9+4.8)/2	0.04	5.82		
	30-50		1	20.00	(4.4+5)/2	0.04	3.76		
	7th Cross Road								
	0-27		1	27.00	(5.7+6.3)/2	0.04	6.48		
	Main Road								
	0-30		1	30.00	(5.2+5.3)/2	0.04	6.30		
	30-60		1	30.00	(5.3+4.9)/2	0.04	6.12		
	60-90		1	30.00	(4.9+6.4)/2	0.04	6.78		
	90-120		1	30.00	(6.4+5.7)/2	0.04	7.26		
	120-150		1	30.00	(5.7+6.9)/2	0.04	7.56		
	150-180		1	30.00	(6.9+5.9)/2	0.04	7.68		
	180-210		1	30.00	(5.9+5.8)/2	0.04	7.02		
	210-240		1	30.00	(5.8+5.7)/2	0.04	6.90		
	240-266		1	26.00	(5.7+5.7)/2	0.04	5.93		
					Total Qty cum		**96.42**	**8438.00**	**813625.71**

P 48

Sl No	Description of Work	Unit	No.	L	B	D	Qty	Rate	Amount
9	KSRRB M800-13. Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803.(P.No.185, I.No.24.15 of PW,P&IWTD SR 2016-17)								
	Measurement recorded on:								
	Edge line	**Sqm**							
	Varadaraja Layout LHS cross Roads 3rd Cross Road								
	0-25		2	25.00	0.10		5.00		
	4th Cross Road								
	0-26		2	26.00	0.10		5.20		
	5th Cross Road								
	0-30		2	30.00	0.10		6.00		
	6th Cross Road								
	0-30		2	30.00	0.10		6.00		
	30-50		2	20.00	0.10		4.00		
	7th Cross Road								
	0-27		2	27.00	0.10		5.40		
	Main Road								
	0-30		2	30.00	0.10		6.00		
	30-60		2	30.00	0.10		6.00		
	60-90		2	30.00	0.10		6.00		
	90-120		2	30.00	0.10		6.00		
	120-150		2	30.00	0.10		6.00		
	150-180		2	30.00	0.10		6.00		
	180-210		2	30.00	0.10		6.00		
	210-240		2	30.00	0.10		6.00		
	240-266		2	26.00	0.10		5.20		
	Center line		44	3.00	0.10		13.20		
					Total Qty Sqm		**98.00**	**570.00**	**55860.00**
					Total Construction Cost				**3460604.09**

AE(Civil) N.D
08/02/18

Assistant Engineer
Kodigehalli
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P:49